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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,001	02/11/2004	Nobuyuki Nagai	09792909-5806	3428

26263 7590 03/28/2006

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EXAMINER	
BERNATZ, KEVIN M	
ART UNIT	**PAPER NUMBER**
1773	

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/777,001	NAGAI, NOBUYUKI	
	Examiner	Art Unit	
	Kevin M. Bernatz	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Magnetic Tape With Two or More Column-like Magnetic Layers and Controlled Heat-Shrinkage and Humidity Expansion".

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (f) he did not himself invent the subject matter sought to be patented.

3. Claims 1 – 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Motohashi (U.S. Patent No. 2004/0126622 A1); ***- and –***

4. Claims 1 – 6 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter, since Motohashi appears to have invented the claimed subject matter for the reasons noted below.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Furthermore, the Examiner notes that these rejection can be overcome by perfecting applicant's claim to priority by submission of a certified English translation of the foreign priority document.

Regarding claims 1 – 6, Motohashi discloses a magnetic tape meeting applicants' claimed structural limitations (*see example 1*).

Regarding the limitations in the heat-shrinkage ratio and the humidity expansion coefficient, it has been held that where claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established and the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC 102 or on *prima facie* obviousness under 35 USC 103, jointly or alternatively. Therefore, the *prime facie* case can be rebutted by ***evidence*** showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the

applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In the instant case, the Examiner notes that the disclosed prior art is substantially identical in structure and composition and was prepared by the same assignee (Sony Corp) at about the same time of inventive conception (2002 – 2003). As such, the Examiner deems there is sound basis for the position that example 1 would inherently meet the claimed limitations regarding the heat-shrinkage ratio and the humidity expansion coefficient.

5. Claims 1 – 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Motohashi (U.S. Patent No. 2005/0266273 A1).

6. Claims 1 – 6 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter, since Motohashi appears to have invented the claimed subject matter for the reasons noted below.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Furthermore, the Examiner notes that these rejection can be overcome by perfecting

applicant's claim to priority by submission of a certified English translation of the foreign priority document.

Regarding claims 1 – 6, Motohashi discloses a magnetic tape meeting applicants' claimed structural limitations (*see example 1*).

Regarding the limitations in the heat-shrinkage ratio and the humidity expansion coefficient, it has been held that where claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established and the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC 102 or on *prima facie* obviousness under 35 USC 103, jointly or alternatively. Therefore, the *prime facie* case can be rebutted by ***evidence*** showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In the instant case, the Examiner notes that the disclosed prior art is substantially identical in structure and composition and was prepared by the same assignee (Sony Corp) at about the same time of inventive conception (2002 – 2003). As such, the Examiner deems there is sound basis for the position that example 1 would inherently

meet the claimed limitations regarding the heat-shrinkage ratio and the humidity expansion coefficient.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takai et al. (U.S. Patent No. 4,770,924) in view of Saito et al. (either JP 2002-025033 A or U.S. Patent App. No. 2002/0018918 A1). See Saito et al. ('918 A1), which is the English language equivalent of JP '033 A.

Regarding claim 1, Takai et al. disclose a magnetic tape (*col. 1, lines 5 – 17*) comprising a longitudinally extending nonmagnetic support (*Figures 5 and 6, element 2*); a magnetic layer formed meeting applicant's claimed structural limitations (*elements 3 and 4*), a protective layer (*element 12*) formed on said magnetic layer; and a backcoating layer (*element 14*) formed on the other surface of said nonmagnetic support.

Takai et al. fail to disclose controlling the heat-shrinkage ratio in the longitudinal and width directions to meet applicant's claimed limitations, nor controlling the humidity expansion coefficient to meet applicant's claimed limitations.

However, Saito et al. teach that it is known in the art to control the heat-shrinkage ratio and the humidity expansion coefficient of the support to meet applicant's claimed limitations for all planar directions (*Paragraph 0134*) and that it is known to control the overall medium to possess a thermal shrinkage ratio (i.e. "heat-shrinkage ratio") meeting applicant's claimed limitations (*Paragraphs 0154* – 0156) inorder to insure good running durability and recording characteristics. While Saito et al. do not explicitly mention controlling the humidity expansion coefficient of the entire medium to within the claimed range, the Examiner deems that it would have been obvious to one of ordinary skill given the teachings of Saito et al. since Saito et al. explicitly teach controlling the humidity coefficient of the support to such a value (where the support is known to make up the vast majority of the structure of the magnetic tape given the relative thickness values of the various layers).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Takai et al. to insure that the tape possesses a heat-shrinkage ratio and humidity expansion coefficient meeting applicant's claimed limitations as taught by Saito et al. since Saito et al. teach controlling the heat-shrinkage ratio and humidity coefficient in a magnetic recording medium to values meeting applicant's claimed ranges leads to magnetic tapes having improved durability and recording characteristics.

Regarding claim 2, Takai et al. disclose supports meeting applicant's claimed thickness limitations (*col. 10, lines 6 – 14 and examples*)

Regarding claim 3, Takai et al. disclose magnetic layers meeting applicants' claimed thickness limitations (*col. 7, lines 23 – 25*).

Regarding claims 4 and 6, Takai et al. disclose ratio's meeting applicants' claimed limitations (*col. 7, lines 23 – 25; col. 10, lines 6 – 14; col. 22, lines 14 – 19; and col. 28, lines 43 – 54 – where the Examiner notes that for the thinning magnetic layer of 50 nm and a maximum thickness of all other layers, the ratio is 22,570 nm / 50 nm = 451*).

Regarding claim 5, the Examiner takes official notice that the width of the magnetic tape is a known results effective variable in that the width of tape determines with what type of recording apparatus the tape can be used. I.e. almost as in an "intended use", one of ordinary skill in the art would recognize that if one had a recording apparatus utilizing 2 cm widths, the tape width would obviously be formed at 2 cm. Likewise, for use in a recording apparatus utilizing a width of 1.27 cm, it would have been obvious to form the tape into a width of 1.27 cm.

The Examiner deems that it would have been obvious to one having ordinary skill in the art to have determined the optimum value of a results effective variable such as the width through routine experimentation, especially given the knowledge in the art that a tape with a 2 cm width cannot be used in a recording apparatus requiring a 1.27 cm width. *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Geisler*, 116 F. 3d 1465, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); *In re Aller*, 220 F.2d, 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Bernatz whose telephone number is (571) 272-1505. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB
March 8, 2006

Kevin M. Bernatz, PhD
Primary Examiner